

## ANIMAL INSECT CONTROL

Animal	Pest Problem	Insecticide Formulation	Method and Rate	Restrictions/Remarks
HORSES	Bots	Ivermectin (Zimecterin, Eqvalen, Equimectrin) 1.87% paste	Oral paste. Drug of choice.	Treat horses after second killing frost.
		Quest Plus Equine Oral Gel (moxidectin/praziquantel)	Oral paste.	
		Equinox Dewormer (ivermectin/praziquantel)	Oral paste.	
		Quest Equine Oral Gel (moxidectin)	Oral paste.	
		<b>Manual Controls</b>	Sponge animal with warm water (120 degrees F) to initiate egg hatching.	Firmly sponge horse's forelegs, chest, neck and belly on cool days (below 60 degrees F) so that larva will hatch and die of exposure.
	Lice, Ticks	Co-Ral ELI (coumaphos 11.6%)	For horn flies and lice, use 2.5 oz in 4 gal of water. For ticks, use 5 oz in 4 gal of water.	Follow label directions. Do not use on horses intended for slaughter. Co-Ral is a cholinesterase inhibitor. Do not treat sick, stressed or convalescent animals. Do not use on animals less than 3 months of age.
		Co-Ral Fly and Tick Spray (6.15% coumaphos)	For horn flies and lice, use 5 oz in 4 gal water. For ticks, use 10 oz in 4 gal water.	Follow label directions. Do not use on horses intended for slaughter. Co-Ral is a cholinesterase inhibitor. Do not treat sick, stressed or convalescent animals. Do not use on animals less than 3 months of age.
		Atroban 11% EC (permethrin)	Mix 1 pt in 25 gal water.	Use 2 qt spray per animal.
		Horse Lice Duster III (0.25% permethrin)	Apply 2 oz over head, shoulders and back.	
		Clean-up Pour-on (5% diflubenzuron and 5% permethrin)	Apply 3 mL/100 lb body weight as a spray or wipe-on only. Do not apply more than 30 mL to any one animal.	
Horn Flies Stable Flies Horse Flies Mosquitoes Black Flies Deer Flies Biting Gnats House Flies Face Flies	Atroban 11% EC (permethrin)	Mix 1 pt 11% EC with 25 gal water. Horn flies require only 1 pt 11% EC/50 gal water.	Use 2 qt finished spray per animal.	
	Permethrin II and generics (10% permethrin)	<b>For high-pressure sprayers:</b> Mix 1 qt in 200 gal of water; 8 oz in 50 gal of water.  <b>For hand or garden sprayers and low-pressure sprayers:</b> Mix 8 oz in 3 gal, 2.5 oz (5 Tbsp) in 1 gal or 20 mL (4 tsp) in 1 qt of water.	Spray to thoroughly cover entire animal. Apply from 1/2 to 1 gal of spray per head. For lice or mites, a second treatment is recommended 14-21 days later.  Spray each animal with up to 8 oz of mixed spray. For lice and mites, a second treatment is recommended 14-21 days later.	
	Spray-N-Repel (pyrethrins)	Pyrethrin mist spray.	2 oz/animal.	
	Flypel, Flysect, Equi-Spot (permethrin or pyrethrin)	Ready-to-use sprays and spot-ons.	Follow label directions.	

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		Coumaphos (Co-Ral)	Mix 2.5 oz of 11.6% EC in 4 gal of water.	Apply about 8 fl oz as light spray with attention to face, head and legs. Do not treat animals intended for slaughter. Repeat as necessary.		
		Flypel, Flysect (permethrin or pyrethrin)	Ready-to-use sprays and spot-ons.			
		Tri-Tec 14 (cypermethrin + pyrethrin)	Fly repellent and killer. Ready to use in dispenser.	Also kills ticks.		
		Tri-Tec Concentrate fly spray for horses (cypermethrin, pyrethrin, piperonyl butoxide, Di-n-propyl isocinchomeronate, butoxy polypropylene glycol)	Mix 1 part Tri-Tec Concentrate to 3 parts water. Spray or wipe-on solution.	Do not allow solution in horse's eyes, nose or mouth. Wear protective gloves when using as a wipe-on.		
		Equi-Spot Spot-on Fly Control (permethrin)	Ready to use. Follow label directions.			
		A number of wipe-on or aerosol spray specialty products are also available for purchase ready to use on horses.				
		Brute Pour-on, Tuttle's Brute Insecticide for Horses (10% permethrin)	Ready to use. Apply 3-6 mL per 200 lb body weight (do not exceed 30 mL).	Apply as a whole body wipe with a cloth or insecticide application mitt. For horn flies, pour 3-6 mL per 200 lb body weight over the withers and down the back. Do not treat more often than once every 7 days. Do not treat foals under 12 weeks of age.		
Permethrin CDS, Buzz Off Pour-on, Martin's Fly Ban Pour-on (7.4% permethrin and 7.4% piperonyl butoxide)	Ready to use. Apply 8-16 mL as a pour-on spray or wipe.	Apply as a whole body wipe with a cloth or insecticide application mitt. For pour-on application, pour over the withers and down the back. For spray application, apply with a mist sprayer in an undiluted form after riding or exercise.				
Python Dust (0.075% ζ-cypermethrin and 0.150% piperonyl butoxide)	Ready-to-use dust. Apply up to 2 oz per animal.	Do not apply more often than every 3 days. Also controls ticks.				

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HORSE BARNs	Flies	<b>Sanitation, Biological Control and Integrated Pest Management (IPM)</b>	Sanitation is critical to any fly control program in horse barns and animal housing facilities. IPM includes sanitation, insecticides (baits, contact insecticides, etc.), surveillance (monitoring and/or trapping) and biological control (conserving natural enemies and/or releases). Use insecticides judiciously to minimize impact on natural enemies and to prevent or delay insecticide resistance. Use a combination of management methods.	Waste (spilled feed, wet feed, manure, bedding) removal and management is the first line of defense in any filth fly management program. Prompt removal and disposal (such as spreading on pastures) of waste will reduce filth fly breeding sites and break the house fly life cycle. Some producers have experienced reduced fly populations with weekly releases of parasitic wasps beginning in April or May. Releases should be made in dry areas out of traffic and in areas where flies reproduce. <b>Parasite and/or insecticide use are not a substitute for a good sanitation program.</b>
		<b>Bait Mixtures</b> QuickBayt, Martin's Quick Draw and Bonanza fly bait (0.5% imidacloprid and 0.1% muscalure ((z)-9-tricosene)) Ready-to-Use Fly Bait	Ready-to-use fly bait. Scatter 6 oz of bait/1,000 sq ft around the outside of horse barns in areas inaccessible to horses. Can also be mixed with water and painted onto fly resting areas. See label directions.	Use only in fly bait stations inside horse stables. Place bait stations in areas inaccessible to animals.
		QuickBayt Disposable Fly Bait Strip (0.5% imidacloprid and 0.1% muscalure ((z)-9-tricosene))	Ready-to-use strip. Use 1 bait strip/250 sq ft.	Do not use in areas accessible to food-producing animals or allow to contact food or water.
		QuickBayt Spot Spray (10% imidacloprid and 0.1% muscalure ((z)-9-tricosene))	Mix 16 oz/gal water.	For use in and around agriculture production facilities such turkey and chicken houses, cattle, sheep and goat facilities, feedlots, dairy barns, swine confinement buildings dog kennels and horse stables. Do not apply on surfaces accessible to children or pets. Do not apply where animals can ingest the bait.
		Golden Malrin (1.1% methomyl and 0.049% (z)-9-tricosene)	Ready to use. Scatter 4 oz per 500 sq ft of area where flies congregate, rest or feed, or use bait in any commercial bait station.	Use as a scatter bait only around the outside of animal housing areas. Can be used in horse stables <b>ONLY</b> if used in bait stations. Bait stations must be hung at least 4 feet from ground level. Scatter baits and bait stations must only be used in areas inaccessible to animals, pets or children.
		Nithiazine strip (QuikStrike)	Ready to use.	Do not use in areas accessible to animals.
		Agita 1GB fly bait (1% thiamethoxam and 0.1% (z)-9-tricosene)	Ready-to-use fly bait. Use as directed on label.	Apply only in areas inaccessible to children, pets, domestic animals, wildlife or poultry. May be used in hanging or stationary bait stations not accessible to children, pets, livestock or poultry. Do not apply bait where animals can lick the product. Do not apply directly to livestock or livestock feed as illegal residues may occur.

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<b>HORSE BARNs</b>	<b>Flies</b> (cont.)	<b>Bait Mixtures</b> Agita 10 WG (10% thiamethoxam and 0.05% (z)-9-tricosene)	Spot spray fly bait. Mix 8 oz Agita 10 WG with 60 oz lukewarm water to treat 500 sq ft of surface area.	Apply only in areas inaccessible to children, pets, domestic animals, wildlife or poultry. Do not apply bait where animals can lick the product. Do not apply directly to livestock or livestock feed as illegal residues may occur.
		<b>Automatic Spray Systems</b> Resmethrin, pyrethrin and piperonyl butoxide		Follow label directions.
	<b>Fly Maggots</b> (developing in manure and/or moist spilled feed)	Neporex 2 SG (2% cyromazine)	<b>Spray:</b> Mix 1 lb Neporex 2 SG per gal of water. Apply as a coarse low-pressure spray on fly breeding sites with suitable spray equipment (hand-pressurized or power-operated sprayers). One gallon of finished solution will treat 200 sq ft.  <b>Scatter:</b> Apply 1 lb Neporex 2 SG per 200 sq ft. Apply after cleaning underneath bedding on stall floors.	Do not apply directly to livestock or livestock feed. Do not feed treated manure to animals. (ONLY FOR HORSES NOT INTENDED FOR SLAUGHTER OR FOOD.)
	SimpliFly LarvaStop Fly growth regulator (0.24% diflubenzuron)	FOR HOUSE AND STABLE FLIES ONLY. Feed daily to horses. Rate is dependent on weight of the horse.	Read and follow labeled rates. Do not use on horses intended for slaughter. Prevents the development of house and stable fly larvae in treated manure.	
	Equi-Trol (Rabon, tetrachlorvinphos)	Feed-through house fly control for horse barns and stables. Add 1 oz of Equi-Trol pellets to your horse's daily ration.	Start feeding in early spring and continue through the house fly season. Kills manure-breeding flies. Will not harm domestic animals or wildlife.	